UNITED STATES PATENT AND TRADEMARK OFFICE

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>28 June 2005</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-41</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-41</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>17 January 2002</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
    application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Response to Arguments

1.   Applicant's arguments with respect to claims 1-41 have been considered but are

moot in view of the new ground(s) of rejection.

2.   Applicant argued in substance the amended claims 1, 12, 14, 16, 19, 20, 25, 28,

33, and 36-41. The new grounds teach these and the added features. (See below).

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.   Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by French

(6,654,794). French teaches a method comprising: receiving at an I/O manager an I/O

request initiated from an application program directed to a file on a WebDAV server (col.

4, line 58-col. 5, line 19); directing the I/O request to a WebDAV redirector

communicating with the WebDAV server to determine whether the request can be

handled (col. 4, lines 20-41 and col. 5, lines 42-57), and if so, requesting a file system to

create the file (col. 6, lines 21-34), downloading the file to a local cache of the file

system (col. 14, table II), and returning a file handle corresponding to the file in the local

cache to the application program (col. 4, line 66-col. 5, line 19); providing access to the

file in the local cache of the file system via the file handle (col. 5, lines 42-57); and

receiving a request to close the file via the file handle, and when received, uploading the

file from the local cache of the file system to the WebDAV server (col. 8, table I).

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 1-11, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Serlet et al. (6,842,770) and French (6,654,794).

7.   As per claim 1, Serlet et al. teaches returning a file handle corresponding to the

file in the local cache to the application program (see Serlet et al., col. 11, lines 24-49);

and receiving a request to close the file via the file handle, and when received,

uploading the file from the local cache of the file system to the WebDAV server (see

Serlet et al., col. 12, lines 45-54). However, Serlet et al. fails to teach a method

comprising: receiving at an I/O manager an I/O request initiated from an application

program directed to a file on a WebDAV server; directing the I/O request to a WebDAV

redirector communicating with the WebDAV server to determine whether the request

can be handled, and if so, requesting a file system to create the file, downloading the

file to a local cache of the file system and providing access to the file in the local cache

of the file system via the file handle. French teaches a method comprising: receiving at

an I/O manager an I/O request initiated from an application program directed to a file on

a WebDAV server (col. 4, line 58-col. 5, line 19); directing the I/O request to a WebDAV

redirector communicating with the WebDAV server to determine whether the request

can be handled (col. 4, lines 20-41 and col. 5, lines 42-57), and if so, requesting a file

system to create the file (col. 6, lines 21-34), downloading the file to a local cache of the

file system (col. 14, table II); and providing access to the file in the local cache of the file

system via the file handle (col. 5, lines 42-57). It would have been obvious to one having

ordinary skill in the art at the time of the invention to modify Serlet et al. to a method

comprising: receiving at an I/O manager an I/O request initiated from an application

program directed to a file on a WebDAV server; directing the I/O request to a WebDAV

redirector communicating with the WebDAV server to determine whether the request

can be handled, and if so, requesting a file system to create the file, downloading the

file to a local cache of the file system and providing access to the file in the local cache

of the file system via the file handle in order to provide a client with an improved network

file system driver for accessing a remote resource maintained by a server in

communication with the client via a data network (see French, col. 2, lines 1-7).

8.   As per claims 2-11, and 15, the above-mentioned motivation of claim 1 stands as

the motivation to further combine Serlet et al. and French.

9.   As per claim 2, Serlet et al. and French teach the above mentioned limitations of

claim 1, but French fails to teach receiving an I/O request initiated from an application

program comprises, receiving a Universal Resource Identifier corresponding to a file on

the WebDAV server. However, Serlet et al. teaches receiving an I/O request initiated

from an application program comprises, receiving a Universal Resource Identifier

corresponding to a file on the WebDAV server (column 9, lines 38-53).

10.   As per claim 3, Serlet et al. and French teach the above mentioned limitations of

claim 1, but French fails to teach wherein receiving an I/O request initiated from an

application program comprises, receiving a filename and an identifier previously

mapped to a share on the WebDAV server. However, Serlet et al. teaches wherein

receiving an I/O request initiated from an application program comprises, receiving a

filename and an identifier previously mapped to a share on the WebDAV server (column

9, lines 54-63).

11.   As per claim 4, Serlet et al. and French teach the above mentioned limitations of

claim 1, but French fails to teach a method of communicating with the WebDAV server

to determine whether the request can be handled, comprises, issuing an HTTP

OPTIONS request, and evaluating a response therefrom. However, Serlet et al. teaches

a method of communicating with the WebDAV server to determine whether the request

can be handled, comprises, issuing an HTTP OPTIONS request, and evaluating a

response therefrom (column 6, line 65-column 7, line 34: wherein the request is an

options request since it can be a command to write file, rename file, rename directory,

etc.).

12.   As per claim 5, Serlet et al. and French teach the above mentioned limitations of

claim 1, but French fails to teach a method of communicating with the WebDAV server

to determine whether the request can be handled, comprises, issuing a WebDAV

PROPFIND request directed to share on the WebDAV server, and evaluating a

response therefrom. However, Serlet et al. teaches a method of communicating with the WebDAV server to determine whether the request can be handled, comprises, issuing a WebDAV PROPFIND request directed to share on the WebDAV server, and evaluating a response therefrom (column 11, lines 24-49).

13.   As per claim 6, Serlet et al. and French teach the above mentioned limitations of claims 1 and 5, but French fails to teach a method wherein the WebDAV server returns property information in response to the WebDAV PROPFIND request directed to the share and further comprising, maintaining the property information in a local data structure. However, Serlet et al. teaches a method wherein the WebDAV server returns property information in response to the WebDAV PROPFIND request directed to the share and further comprising, maintaining the property information in a local data structure (column 8, line 66-column 9, line 22; column 11, lines 50-65).

14.   As per claim 7, Serlet et al. and French teach the above mentioned limitations of claim 1, but French fails to teach a method of communicating with the WebDAV server to determine whether the request can be handled, comprises, issuing a WebDAV PROPFIND request directed to on the WeDDAV server, and evaluating a response therefrom. However, Serlet et al. teaches a method of communicating with the WebDAV server to determine whether the request can be handled, comprises, issuing a WebDAV PROPFIND request directed to on the WeDDAV server, and evaluating a response therefrom (column 11, lines 24-49).

15.   As per claim 8, Serlet et al. and French teach the above mentioned limitations of claims 1 and 7, but French fails to teach a method wherein the WebDAV server returns

property information in response to the WebDAV PROPFIND request directed to the

file, and further comprising, maintaining the property information in a local data

structure. However, Serlet et al. teaches a method wherein the WebDAV server returns

property information in response to the WebDAV PROPFIND request directed to the

file, and further comprising, maintaining the property information in a local data structure

(column 8, line 66-column 9, line 22; column 11, lines 50-65).

16.   As per claim 9, Serlet et al. and French teach the above mentioned limitations of

claim 1, but French fails to teach a method wherein communicating with the WebDAV

server to determine whether the request can be handled comprises: issuing an HTTP

OPTIONS request, evaluating a corresponding response, and determining that the

server a WebDAV server; issuing a WebDAV PROPFIND request directed to a share on

the WebDAV server, evaluating a corresponding response, and determining that the

share exists on the WebDAV server, the response including share property information;

and issuing a WebDAV PROPFIND request directed to the file, evaluating a

corresponding response, and determining that the file exists, the response including file

property information. However, Serlet et al. teaches a method wherein communicating

with the WebDAV server to determine whether the request can be handled comprises:

issuing an HTTP OPTIONS request, evaluating a corresponding response, and

determining that the server a WebDAV server (column 6, line 65-column 7, line 34:

wherein the request in an options request since it can be a command to write file,

rename file, rename directory, etc.); issuing a WebDAV PROPFIND request directed to

a share on the WebDAV server, evaluating a corresponding response, and determining

that the share exists on the WebDAV server, the response including share property information; and issuing a WebDAV PROPFIND request directed to the file, evaluating a corresponding response, and determining that the file exists, the response including file property information (column 11, lines 24-49).

17.   As per claim 10, Serlet et al. and French teach the above mentioned limitations of claims 1 and 9, but French fails to teach a method of maintaining the share property information and the file property information in at least one local data structure. However, Serlet et al. teaches a method of maintaining the share property information and the file property information in at least one local data structure (column 8, line 66-column 9, line 22; column 11, lines 50-65).

18.   As per claim 11, Serlet et al. and French teach the above mentioned limitations of claims 1 and 9, but French fails to teach a method of communicating with the WebDAV server indicates that the request can be handled, and further comprising, communicating with at least one other local component to indicate that at least this request can be handled. However, Serlet et al. teaches a method of communicating with the WebDAV server indicates that the request can be handled, and further comprising, communicating with at least one other local component to indicate that at least this request can be handled (column 5, lines 20-52).

19.   As per claim 15, Serlet et al. and French teach the above mentioned limitations of claims 1 and 9, but French fails to teach a computer-readable medium having computer-executable instructions for performing the method claim 1. However, Serlet et

al. teaches a computer-readable medium having computer-executable instructions for

performing the method claim 1 (column 2, line 51-column 3, line 19).

20.   Claims 12-14, and 28-30 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Serlet et al. (6,842,770) and French (6,654,794) as applied to claims

1 and 16 above, and further in view of Prust (6,714,968).

21.   As per claim 12, Serlet et al. and French teach the mentioned limitations of claim

1 above, but fail to teach determining that the file is encrypted on the WebDAV server,

and wherein downloading the file to a local cache comprises, communicating with the

file system to create an image of the file in the local cache that is also encrypted. Prust

teaches determining that the file is encrypted on the WebDAV server, and wherein

downloading the file to a local cache comprises, communicating with the file system to

create an image of the file in the local cache that is also encrypted (see Prust, column 7,

lines 39-55: wherein encryption and decryption may be done either when the file is read

or written). It would have been obvious to one having ordinary skill in the art at the time

of the invention to add determining that the file is encrypted on the WebDAV server, and

wherein downloading the file to a local cache comprises, communicating with the file

system to create an image of the file in the local cache that is also encrypted in order to

allocate a corresponding storage area for each user and store the respective user

information in metadata database (see Prust, col. 7, line 59-col. 8, line 7).

22.   As per claim 13, Serlet et al. and French teach the mentioned limitations of

claims 1 and 12 above, but fail to teach communicating with the file system to open the

image of the file such that the file system will transparently decrypt file data on read

requests and will transparently encrypt file data on write requests to the file. Prust

teaches communicating with the file system to open the image of the file such that the

file system will transparently decrypt file data on read requests and will transparently

encrypt file data on write requests to the file (see Prust, column 7, lines 39-55: wherein

encryption and decryption may be done either when the file is read or written). It would

have been obvious to one having ordinary skill in the art at the time of the invention to

add communicating with the file system to open the image of the file such that the file

system will transparently decrypt file data on read requests and will transparently

encrypt file data on write requests to the file in order to allow the user to access the

respective storage area via the many access interfaces (see Prust, col. 7, line 59-col. 8,

line 7).

23.   As per claim 14, Serlet et al. and French teach the mentioned limitations of

claims 1 and 12 above, but fail to teach uploading the file from the local cache to the

WebDAV server comprises, communicating with the file system to read data from the

local image of the file such that the file will be uploaded as the encrypted image thereof.

Prust teaches uploading the file from the local cache to the WebDAV server comprises,

communicating with the file system to read data from the local image of the file such

that the file will be uploaded as the encrypted image thereof (see Prust, column 7, lines

39-55: wherein encryption and decryption may be done either when the file is read or

written). It would have been obvious to one having ordinary skill in the art at the time of

the invention to add uploading the file from the local cache to the WebDAV server

comprises, communicating with the file system to read data from the local image of the file such that the file will be uploaded as the encrypted image thereof in order to prevent unauthorized users from accessing information about other users (see Prust, column 7, lines 39-55).

24.   As per claim 28, Serlet et al. and French teach the mentioned limitations of claim 16 above, but fail to teach the application request comprises an I/O request directed to an encrypted file, and further comprising, automatically decrypting the data locally when downloading the encrypted file from the WebDAV server and automatically encrypting the data locally when uploading the encrypted file to the WebDAV server. However, Prust teaches the application request comprises an I/O request directed to an encrypted file, and further comprising, automatically decrypting the data locally when downloading the encrypted file from the WebDAV server and automatically encrypting the data locally when uploading the encrypted file to the WebDAV server (see Prust, column 7, lines 39-55: wherein encryption and decryption may be done either when the file is read or written). It would have been obvious to one having ordinary skill in the art at the time of the invention to add the application request comprises an I/O request directed to an encrypted file, and further comprising, automatically decrypting the data locally when downloading the encrypted file from the WebDAV server and automatically encrypting the data locally when uploading the encrypted file to the WebDAV server in order to allocate a corresponding storage area for each user and store the respective user information in metadata database (see Prust, col. 7, line 59-col. 8, line 7).

25.   As per claim 29, Serlet et al. and French teach the mentioned limitations of claim

16 above, but fail to teach the application request comprises an I/O request directed to

a file that is encrypted on the WebDAV server, and wherein handling the request

comprises, creating a local file corresponding to the I/O request and downloading an

image of the file on the WebDAV server to the local file, wherein the local file is written

by a local system such that the image corresponds to the encrypted image on the

WebDAV server. Prust teaches the application request comprises an I/O request

directed to a file that is encrypted on the WebDAV server, and wherein handling the

request comprises, creating a local file corresponding to the I/O request and

downloading an image of the file on the WebDAV server to the local file, wherein the

local file is written by a local system such that the image corresponds to the encrypted

image on the WebDAV server (see Prust, column 7, lines 39-55: wherein encryption

and decryption may be done either when the file is read or written). It would have been

obvious to one having ordinary skill in the art at the time of the invention to add the

application request comprises an I/O request directed to a file that is encrypted on the

WebDAV server, and wherein handling the request comprises, creating a local file

corresponding to the I/O request and downloading an image of the file on the WebDAV

server to the local file, wherein the local file is written by a local system such that the

image corresponds to the encrypted image on the WebDAV server in order to allow the

user to access the respective storage area via the many access interfaces (see Prust,

col. 7, line 59-col. 8, line 7).

26.   As per claim 30, Serlet et al. and French teach the mentioned limitations of

claims 16 and 29 above, but fail to teach communicating with the file system to open the

local file such that the file system will transparently decrypt file data read on read

requests and will transparently encrypt file data written on write requests. Prust teaches

communicating with the file system to open the local file such that the file system will

transparently decrypt file data read on read requests and will transparently encrypt file

data written on write requests (see Prust, column 7, lines 39-55: wherein encryption and

decryption may be done either when the file is read or written). It would have been

obvious to one having ordinary skill in the art at the time of the invention to add

communicating with the file system to open the local file such that the file system will

transparently decrypt file data read on read requests and will transparently encrypt file

data written on write requests in order to store data files and communicate the data files

to the storage server for storage within the storage area (see Prust, col.1, lines 49-67).

27.   Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Serlet et

al. (6,842,770) and Prust (6,714,968). Serlet et al. and Prust teach the limitations

mentioned above in claims 16, 29, and 30 but Prust fails to teach detecting a request to

close the local file, closing the local file, communicating with the file system to open the

local file such that the file will not be decrypted when read and uploading the file to the

WebDAV server as an encrypted file. Serlet et al. however teaches detecting a request

to close the local file, closing the local file, communicating with the file system to open

the local file (see Serlet et al., column 11, lines 24-49); such that the file will not be

decrypted when read (see Serlet et al., column 12, lines 35-44); and uploading the file

to the WebDAV server as an encrypted file (see Serlet et al., column 5, line 60-column 6, line 14: wherein authenticated access functions as being encrypted). It would have been obvious to one having ordinary skill in the art at the time of the invention to add detecting a request to close the local file, closing the local file, communicating with the file system to open the local file such that the file will not be decrypted when read and uploading the file to the WebDAV server as an encrypted file in order to allow only the authorized user to have access to his/her data on the WebDAV server (see Serlet et al., col. 6, lines 15-23).

28.   Claims 16-23, 25-27, and 32-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Serlet et al. (6,842,770) and French (6,654,794).

29.   As per claim 16, Serlet et al. teaches receiving at a local programming interface layer an application request that relates to a Uniform Resource Identifier (see Serlet et al., column 4, line 54-column 5, line 2 and column 5, lines 20-52). However, Serlet et al. fails to teach a method of providing information corresponding to the request to a local WebDAV redirector; and determining at the WebDAV redirector whether a server identified via the application request comprises WebDAV-enabled server, and if so, handling the request. French teaches a method of providing information corresponding to the request to a local WebDAV redirector (see French, col. 4, lines 20-41); and determining at the WebDAV redirector whether a server identified via the application request comprises WebDAV-enabled server, and if so, handling the request (see French, col. 4, lines 42-57). It would have been obvious to one having ordinary skill in

the art at the time of the invention to modify Serlet et al. to a method of providing

information corresponding to the request to a local WebDAV redirector; and determining

at the WebDAV redirector whether a server identified via the application request

comprises WebDAV-enabled server, and if so, handling the request in order to translate

the file system access request into the HTTP-compliant format and output by the client

system on the data network to access the resource (see French, col. 2, lines 8-22).

30.   As per claims 17-23, 25-27, and 32, the above-mentioned motivation of claim 16

stands as the motivation to further combine Serlet et al. and French.

31.   As per claim 17, Serlet et al. and French teach the above-mentioned limitations

of claim 16, but French fails to teach a method wherein the application request includes

the Universal Resource Identifier. However, Serlet et al. teaches the application request

includes the Universal Resource Identifier (column 5, lines 20-52).

32.   As per claim 18, Serlet et al. and French teach the above-mentioned limitations

of claim 16, but French fails to teach a method wherein the application request includes

an identifier that has been previously mapped to at least part of the Universal Resource

Identifier. However, Serlet et al. teaches a method wherein the application request

includes an identifier that has been previously mapped to at least part of the Universal

Resource Identifier (column 9, lines 54-63).

33.   As per claim 19, Serlet et al. and French teach the above-mentioned limitations

of claim 16, but French fails to teach a method of providing information corresponding to

the request to a local WebDAV-related mechanism comprises polling a set of at least

one redirector. However, Serlet et al. teaches a method of providing information

corresponding to the request to a local WebDAV redirector comprises polling a set of at

least one redirector (col. 6, lines 25-54: wherein status information serves the function

of polling).

34.   As per claim 20, Serlet et al. and French teach the above-mentioned limitations

of claim 16, but French fails to teach a method of providing information corresponding to

the request to a local WebDAV redirector comprises polling a set of at least one network

provider. However, Serlet et al. teaches a method of providing information

corresponding to the request to a local WebDAV redirector comprises polling a set of at

least one network provider (col. 6, lines 25-54: wherein status information serves the

function of polling).

35.   As per claim 21, Serlet et al. and French teach the above-mentioned limitations

of claim 16, but French fails to teach a method wherein the application request

comprises an I/O request directed to a file, and wherein handling the request comprises

creating a local file corresponding to the I/O request. However, Serlet et al. teaches a

method wherein the application request comprises an I/O request directed to a file, and

wherein handling the request comprises creating a local file corresponding to the I/O

request (column 7, lines 35-56).

36.   As per claim 22, Serlet et al. and French teach the above-mentioned limitations

of claims 16 and 21, but French fails to teach a method of downloading at least some

file data from the WebDAV server to the local file. However, Serlet et al. teaches

downloading at least some file data from the WebDAV server to the local file (column 4,

lines 27-53: wherein accessing information serves as downloading file data).

37.   As per claim 23, Serlet et al. and French teach the above-mentioned limitations

of claims 16 and 21, but French fails to teach a method of returning a file handle

corresponding to the local file to the application. However, Serlet et al. teaches returning

a file handle corresponding to the local file to the application (column 11, lines 24-49).

38.   As per claim 25, Serlet et al. and French teach the above-mentioned limitations

of claim 16, but French fails to teach a method of determining at the WebDAv redirector

whether the server identified via the application request comprises a WebDAV-enabled

server includes, issuing an HTTP OPTIONS request to the server, and evaluating a

corresponding response. However, Serlet et al. teaches determining at the WebDAv

redirector whether the server identified via the application request comprises a

WebDAV-enabled server includes, issuing an HTTP OPTIONS request to the server,

and evaluating a corresponding response (column 6, line 65-column 7, line 34: wherein

the request is an options request since it can be a command to write file, rename file,

rename directory, etc.).

39.   As per claim 26, Serlet et al. and French teach the above-mentioned limitations

of claims 16 and 25, but French fails to teach a method wherein the application

program's request indicates a share on the WebDAV server and further comprising,

issuing a WebDAV PROPFIND request directed to the share on the WebDAV server.

However, Serlet et al. teaches the application program's request indicates a share on

the WebDAV server and further comprising, issuing a WebDAV PROPFIND request

directed to the share on the WebDAV server (column 11, lines 24-49).

40.   As per claim 27, Serlet et al. and French teach the above-mentioned limitations

of claims 16, 25, and 26, but French fails to teach a method wherein the application

program's request further indicates a file on the share on the WebDAV server, and

further comprising, issuing a WebDAV PROPFIND request directed to the file. However,

Serlet et al. teaches a method wherein the application program's request further

indicates a file on the share on the WebDAV server, and further comprising, issuing a

WebDAV PROPFIND request directed to the file (column 11, lines 24-49).

41.   As per claim 32, Serlet et al. and French teach the above-mentioned limitations

of claims 16, 25, and 26, but French fails to teach a computer-readable medium having

computer-executable instructions for performing the method claim 16. However, Serlet

et al. teaches a computer-readable medium having computer-executable instructions for

performing the method claim 16 (column 2, line 51-column 3, line 19).

42.   As per claim 33, Serlet et al. teaches a system comprising, an application

program that issues WebDAV-related requests including at least one request having an

identifier corresponding to a WebDAV server (see Serlet et al., column 6, lines 25-64).

However Serlet et al. fails to teach a WebDAV redirector, the WebDAV redirector

configured to communicate with a network server to obtain capability information

thereof, and to evaluate the capability information to determine whether the network

server comprises a WebDAV-enabled server; and when the capability information

indicates that the network server is WebDAV-enabled, the WebDAV redirector locally

handling each request corresponding to the WebDAV server that can be handled

locally, and communicating with the WebDAV server to handle requests that cannot be

handled locally. French teaches a WebDAV redirector, the WebDAV redirector configured to communicate with a network server to obtain capability information thereof, and to evaluate the capability information to determine whether the network server comprises a WebDAV-enabled server (see French, col. 7, lines 5-15); and when the capability information indicates that the network server is WebDAV-enabled, the WebDAV redirector locally handling each request corresponding to the WebDAV server that can be handled locally, and communicating with the WebDAV server to handle requests that cannot be handled locally (see French, col. 4, lines 20-41). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Serlet et al. to a WebDAV redirector, the WebDAV redirector configured to communicate with a network server to obtain capability information thereof, and to evaluate the capability information to determine whether the network server comprises a WebDAV-enabled server; and when the capability information indicates that the network server is WebDAV-enabled, the WebDAV redirector locally handling each request corresponding to the WebDAV server that can be handled locally, and communicating with the WebDAV server to handle requests that cannot be handled locally in order to implement the two distinct resource access paths-one for local network resources and one for Internet resources in an efficient manner (see French, col. 1, lines 56-67).

43.   As per claims 34, 35, and 38, the above-mentioned motivation of claim 33 stands as the motivation to further combine Serlet et al. and French.

44.   As per claim 34, Serlet et al. and French teach the above-mentioned limitations of claim 33, but French fails to teach a system wherein the identifier corresponding to a

WebDAV server issued by the application comprises a Universal Resource Identifier.

However, Serlet et al. teaches a system wherein the identifier corresponding to a

WebDAV server issued by the application comprises a Universal Resource Identifier

(column 5, lines 20-52).

45.   As per claim 35, Serlet et al. and French teach the above-mentioned limitations

of claim 33, but French fails to teach a system wherein the identifier corresponding to a

WebDAV server issued by the application comprises an identifier previously mapped to

a share on the WebDAV server. However, Serlet et al. teaches a system wherein the

identifier corresponding to a WebDAV server issued by the application comprises an

identifier previously mapped to a share on the WebDAV server (column 9, lines 54-63).

46.   As per claim 36, Serlet et al. teaches the above-mentioned limitations of claim

33, but fails to teach a system wherein the WebDAV redirector receives requests from

the application via an application programming interface. However, French teaches a

system wherein the WebDAV redirector receives requests from the application via an

application programming interface (see French, col. 4, line 66-col. 5, line 19). It would

have been obvious to one having ordinary skill in the art at the time of the invention to

modify Serlet et al. to a system wherein the WebDAV redirector receives requests from

the application via an application programming interface in order to perform its various

operations and to provide the requisite functionality of its features (see French, col. 4,

line 66-col. 5, line 19).

47.   As per claim 37, Serlet et al. teaches the above-mentioned limitations of claim

33, but fails to teach a system wherein the WebDAV redirector receives the I/O request

from a manager component. However, French teaches a system wherein the WebDAV

redirector receives the I/O request from a manager component (see French, col. 4, lines

58-65). It would have been obvious to one having ordinary skill in the art at the time of

the invention to modify Serlet et al. to a system wherein the WebDAV redirector

receives the I/O request from a manager component in order to order to perform its

various operations and to provide the requisite functionality of its features (see French,

col. 4, line 66-col. 5, line 19).

48.   As per claim 38, Serlet et al. and French teach the above-mentioned limitations

of claim 33, but French fails to teach a system that creates a local representation of the

file; determines whether the file exists on the WebDAV server, and if so, downloads at

least some of the data from the WebDAV server file to the local representation of the

file; returns a file handle corresponding to the local representation of the file to the

application program; receives I/O read and write requests associated with the file

handle and handles the I/O read and write requests via the local representation of the

file; and receives an I/O close request associated with the file handle, and handles the

I/O close request by closing the local representation of the file and uploading at least

part of the local representation of the file to the WebDAV server. However, Serlet et al.

a system that: creates a local representation of the file (column 6, line 65-column 7, line

34); determines whether the file exists on the WebDAV server, and if so, downloads at

least some of the data from the WebDAV server file to the local representation of the file

(column 4, lines 27-53: wherein accessing information serves as downloading file data);

returns a file handle corresponding to the local representation of the file to the

application program (column 11, lines 24-49); receives I/O read and write requests

associated with the file handle and handles the I/O read and write requests via the local

representation of the file (column 11, lines 24-49; column 12, lines 35-44); and receives

an I/O close request associated with the file handle, and handles the I/O close request

by closing the local representation of the file and uploading at least part of the local

representation of the file to the WebDAV server (column 11, lines 24-49).

49.   Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Serlet et

al. (6,842,770) and French (6,654,794) as applied to claim 16 above, and further in view

of Deen et al. (6,629,127). Serlet et al. and French teach the mentioned limitations of

claim 16 above, but fail to teach a networking request to browse a network share on the

WebDAV server, and wherein handling the request includes enumerating information of

the network share. However, Deen et al. teaches a networking request to browse a

network share on the WebDAV server, and wherein handling the request includes

enumerating information of the network share (see Deen et al., column 16, line 48-

column 17, line 15). It would have been obvious to one having ordinary skill in the art at

the time of the invention to add a networking request to browse a network share on the

WebDAV server, and wherein handling the request includes enumerating information of

the network share in order to carefully track the structure of the namespace and not the

physical layout of the file system (see Deen et al., col. 16, line 48-col. 17, line 15).

50.   Claims 39-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Serlet et al. (6,842,770) and French (6,654,794) as applied to claims 33 and 39 above,

and further in view of Prust (6,714,968).

51.   As per claim 39, Serlet et al. and French et al. teach the limitations mentioned

above in claims 33 and 38. Serlet et al. also teaches a system wherein requesting the

file system to create a local file that is opened such that transparent encryption and

decryption are not enabled therefor (see Serlet et al., column 5, line 60-column 6, line

14: wherein authenticated access may not be enabled by the user); requesting the file

system to close the local file (see Serlet et al., column 11, lines 24-49). But Serlet et al.

fails to teach the WebDAV file is encrypted, and wherein downloading at least some of

the encrypted file data by requesting the file system to write to the local file without

translation thereof. Prust however teaches the WebDAV file is encrypted (see Prust,

column 7, lines 39-55: wherein encryption and decryption may be done either when the

file is read or written); downloading at least some of the encrypted file data by

requesting the file system to write to the local file without translation thereof (see Prust,

column 7, lines 7-34). It would have been obvious to one having ordinary skill in the art

at the time of the invention to modify Serlet et al. and French to a system wherein the

WebDAV file is encrypted, and that creates the local representation of the file by

downloading at least some of the encrypted file data by requesting the file system to

write to the local file without translation thereof in order to allow an user to access virtual

storage area using a conventional electronic mail software application (see Prust,

column 7, lines 7-34).

52.   As per claim 40, Serlet et al., French et al., and Prust teach the limitations

mentioned above in claims 33, 38, and 39. Serlet et al. also teaches a system

requesting the file system to reopen the local file (column 11, lines 24-49). But Serlet et

al. fails to teach reads therefrom are decrypted and writes thereto are encrypted. Prust

however teaches reads therefrom are decrypted and writes thereto are encrypted

(column 7, lines 39-55). It would have been obvious to one having ordinary skill in the

art at the time of the invention to add reads therefrom are decrypted and writes thereto

are encrypted in order to allocate a corresponding storage area for each user and store

the respective user information in metadata database (see Prust, col. 7, line 59-col.8,

line 7).

53.   As per claim 41, Serlet et al., French, and Prust teach the limitations mentioned

above in claims 33, 38, 39, and 40. But French and Prust fail to teach when the

WebDAV redirector handles the I/O close request, and before uploading the file, the

WebDAV redirector closes the local representation of the file, and reopens the local file

by requesting the file system to open the file such that reads therefrom are not

decrypted. Serlet et al. however teaches a method of handling the I/O close request,

and before uploading the file, closing the local representation of the file (see Serlet et

al., column 11, lines 24-49), and reopening the local file by requesting the file system to

open the file such that reads therefrom are not decrypted (see Serlet et al., column 5,

line 60-column 6, line 14: wherein authenticated access function as being encrypted). It

would have been obvious to one having ordinary skill in the art at the time of the

invention to add a method of handling the I/O close request, and before uploading the

file, closing the local representation of the file, and reopening the local file by requesting

the file system to open the file such that reads therefrom are not decrypted in order for

authorized users to access their data on the WebDAV server without needing to input

authentication information for every transmission (see Serlet et al., col. 6, lines 15-23).

Conclusion

54.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

55.   A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

        Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Ranodhi Serrao whose telephone number is (571)272-

7967. The examiner can normally be reached on 8:00-4:30pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Rupal Dharia can be reached on (571)272-3880. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

RUPAL DHARIA
SUPERVISORY PATENT EXAMINER